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Two new flea species in the genera *Plocopsylla* Jordan and *Hectopsylla* Frauenfeld (Insecta, Siphonaptera) from Argentina

by

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With 10 figures

Abstract

Two new species from the Chubut province, Argentina, are described and figured: *Plocopsylla angusticeps* n. sp. (♂) and *Hectopsylla gracilis* n. sp. (♂♀); one female, most probably belonging to *Plocopsylla chiris* (Jordan), is recorded too.

INTRODUCTION

The author collected on small rodents from Argentina, regularly sent to the Geneva Museum by Mr. A. Kovacs (El Bolson), quite interesting samples of fleas. Those fleas either have been found in the fur of the dead rodents or floating in alcool, and in both cases the host identity indicated for the fleas species might be taken with a certain prudence. Out of those samples two new species can be described below, another fine result was the finding of one female, identified as *Plocopsylla chiris* (Jordan). This species has been recorded only from the types (1 ♂ 1 ♀).

I am deeply indebted to Mr. F.G.A.M. Smit (Tring) for his kind help; I am thanking also Mr. A. M. Hutson (Brit. Mus., London) for the loan of specimens of *Hectopsylla broscus* Jord. et Rothsch., *H. cypha* Jordan and *H. gemina* Jordan.

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Plocopsylla angusticeps n. sp. (Fig. 1-3)

Type material: ♂ holotype, Argentina, prov. Chubut, Puerto Madryn, 42° 46′S 65°03′W, ex: *Akodon olivaceus*, lg. A. Kovacs, 30.IV.1978 (Geneva Museum).

Female unknown.

Description of the male:

Head (fig. 1): Helmet very narrow, broadest portion of prectenidial area less than half-length of the uppermost ctenidial spine, short canals only in the uppermost one-fourth of the prectenidial area present, helmet comb of 11 (right side) to 12 (left side) blunt spines, basal notches almost absent, suture between helmet and gena conspicuous; genal comb of five spines, the uppermost one on the truncate genal lobe, only a little shorter than the others and separated from the next one by a narrow gap; the two genal bristles placed near the anterior margin; labial palpi short, hardly extending beyond the half-length of the foretibia; second antennal segment with four long bristles reaching nearly apex of club.

Thorax: Pronotum (fig. 1) with 3 rows of bristles and a comb of 24 pointed spines; mesa- and metanotum with 3 rows of bristles, metepimeron with two rows of 5 resp. 4 bristles.

Legs: None of tibiae with apical bristles forming a complete row; hind tibia (fig. 2) with seven notches, number of bristles from base to apex as follows: 2-2-3-4-4-4-4, largest bristle of the ultime notch nearly reaching apex of the first tarsal segment, laterally 13-14 bristles; fifth tarsal segment with four pairs of lateral bristles and one pair of basal plantar ones.

Abdomen: Terga with two rows of bristles, those of the anterior one clearly shorter than those of the main row, mostly 9 bristles in the main row, the anterior row on terga IV-VII somewhat reduced (mostly 4 bristles), one bristle below the elongate pointed spiracles, terga I-IV with 2-4 (mostly 3) spinelets; one antesensilial bristle (not inserted on a pedestal), which is a long as the longest one of tergum VII, but a little shorter than segment IV of hind tarsus; sensilium with 16 pits.

Modified segments (fig. 3): Apodem of tergum VIII handle-like and slightly down-turned apically; distal arm of sternum IX with one modified, pointed, but not darkened bristle halfway from apex and three apical short and blunt bristles; basimere very broad and rounded, with a fringe of long bristles round the apical margin, with a conspicuous internal finger-like process; lateral projection of telomere slightly bent upwards apically, this part clearly striated; telomere slender, pointed, a heavy modified "spiniform" bristle with rounded apex in the anterio-ventral angle.

The new species shows clearly all characters of the genus *Plocopsylla* (marginal fringe of bristles on clasper, anterior insertation of genal bristles, etc.), but is distinguished from all species of this genus at once by the very narrow prectenidial area of the helmet. Within this genus it belongs to the species group having on the genal process a spine which is more than half length of the other spines of the genal comb and not separated from them by an obvious gap (*inti* Johnson, *chiris* Jordan, *wolffsohni* Rothschild). Since *Plocopsylla inti* Johnson is characterized by the presence of seven genal spines and the absence of an antesensilial bristle in the male and *P. chiris* Jordan by the presence of two antesensilial bristles in both sexes, the new species seems to be nearest to *P. wolffsohni* (Rothschild). But *P. angusticeps* is easily distinguishable from that species by tbe following characters: antectenidial area of helmet very narrow, the antesensilial bristle not situated on a well defined pedestal, the finger-like process or clasper situated interiorly (not on the dorsal margin), the morphology of the telomere and of sternum IX. The two recently from Chile described species *P. fuegina* and *reigi* (BEAUCOURNU & GALLARDO 1977) belong too to this groupe; both are having one antesensilial bristle and five genal spines,

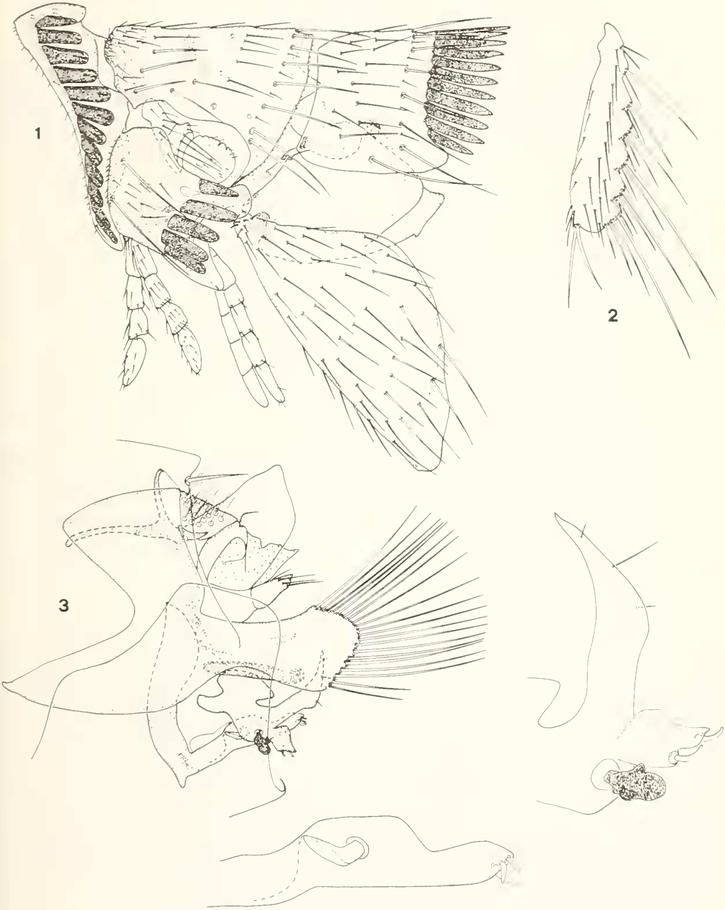

FIG. 1-3.

Plocopsylla angusticeps n. sp.; 1: head and pronotum; 2: hind tibia; 3: modified segments.

but differ from *angusticeps* n. sp. in the much broader helmet, smaller number of spines in the pronotal comb and the modified segments (shape of basi- and telomere particularly).

Besides the new species, three more species of this genus are recorded from Argentina: *chiris* (Jordan), *wolffsohni* (Rothschild) and *traubi* del Ponte.

Plocopsylla chiris (Jordan)

One female from Puerto Madryn (prov. Chubut, lg. A. Kovacs, 23.4.1978) seems to belong to this species recorded up to now only from the types (prov. Rio Negro, Argentina). The specimen fits well to the description, but there is a slight difference in the shape of the anal stylet, which is less tapering than figured by JORDAN (1931).

Hectopsylla gracilis n. sp. (Fig. 4-10)

Type material: 1 ♂ holotype, Argentina, prov. Chubut, Puerto Madryn, ex *Eligmodontia typus*, 23.4.1978; 1 ♂ 7 ♀ paratypes, same locality, same host, IV.1978; 1 ♀ paratype, same data, on unidentified rodent; 1 ♂ 1 ♀ paratypes, Puerto Madryn, Cerro Avansado, IV.1978; 2 ♀ paratypes, Rio Negro, El Bolson, 12.2.1978, all. lg. A. Kovacs.

Holotype and paratypes mounted; holotype and paratypes in the collections of the Geneva Museum, ♀-paratypes also in the British Museum (London) and coll. R. E. Lewis (Ames).

Description: Head (fig. 4): Dorsal part of frons smoothly convexe, frons straight between internal incrassation and preoral tuber, margin between oral angle and genal lobe nearly straight with a sligth concavity; maxillary short, broadly triangular; lacinia in male approximately as long as maxillary palpus and only slightly longer than fore coxa, in female approximately one-third longer than maxillary palpus and fore coxa; genal lobe short; metepimeron normally with 4 bristles; tarsal claws without a basal tooth, fifth tarsal segment with 4 pairs of lateral bristles.

Male (fig. 5): Terga I-III mostly with three bristles on each side (in some cases on one side two), terga IV-VII with two bristles on each side; spiracles on terga of equal size, that on tergum VII slightly bigger. Process P^1 of basimere triangular with well defined angles, apical margin straight, P^2 slender, apically slightly bifurcated, telomere with two tubercles on the anterior margin; its upper manubrium with a broad angle, the lower one curved, finger-like; anterior border of sensilium narrow dorsally, ventrally as broad as the two rows of pits together; dorsal lobe (L^1) of sternum IX more of less rounded, near the basal margin a few tiny pseudosetae; lobe L^2 ventrally enlarged, the apical margin clearly concave, with a few fine lateral bristles and, at its base, two longer and stronger ones; lobe L^3 broadly rounded; sternum VIII with a tooth-like projection in the posterio-ventral angle; tendons of phallosome short, extending only slightly beyond its anterior end and turning upwards; ventral projection of ejaculatory duct broad, slightly pointed on one paratype; apex of phallosome with tooth-like projection.

Female: Posterior margin of head without projecting occipital lobe; processus of lateral metanotal area short, broad, half-length of first segment of maxillary palpus; processus of metepimeron (fig. 6) slender, normally long and only slightly bent downwards (but being quite variable in shape!, fig. 7), processus not heavier sklerotized as metepimere; tergum I with a long and slender median processus, 2 bristles on each side, tergum III normally 3 bristles on each side, the following ones without bristles; tergum VIII (fig. 8) with a rounded ventral apical angle, but the dorsal apical angle is projecting as

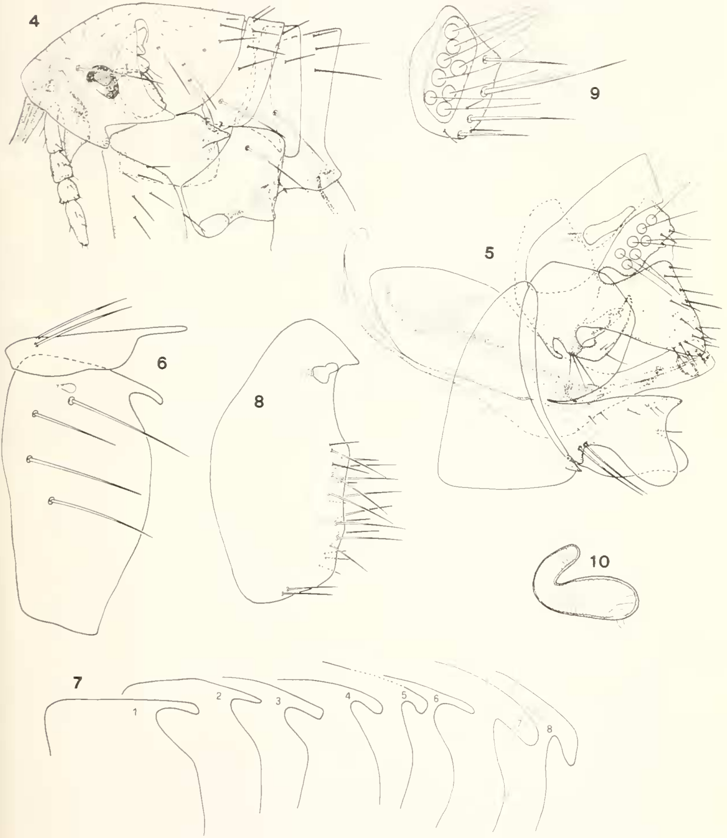

FIG. 4-10.

Hectopsylla gracilis n. sp.; 4: head and thorax ♂; 5: modified segments ♂; 6: tergum I and metepimeron ♀; 7: processus of ♀-metepimeron, showing the variability (7/4 and 7/5 from the same ♀ (El Bolson), left and right side); for comparison the processus of *H. cypha* Jordan (7/7) and of *H. gemina* Jordan (7/8), drawn at the same scale; 8: tergum VIII ♀; 9: sensilium ♀ 10: spermatheca.

a tooth; basal rim of sensilium (fig. 9) not as broad as the two rows of pits together; spermatheca (fig. 10) (measured from anterior margin of tail to apex of head) slightly shorter to slightly longer than first segment of hind tarsus.

Derivatio nominis: named after the slender process of metepimeron.

In the identification key to the species of the genus *Hectopsylla* (Hopkins & Rothschild 1953; Johnson 1957) the new species keys out near *eskeyi* Jordan (Ecuador and Peru), *suarezi* Fox (Ecuador, Peru, Chile) and *cypha* Jordan (Argentina), but may be easily distinguished from them by the combination of following characters: shape of processus of metepimeron, processus of lateral metanotal area shorter, fifth tarsal segment with four pairs of lateral bristles; structure of ♂-modified segments, number of bristles on abdominal terga.

Up to now the following species of *Hectopsylla* have been recorded from Argentina: *psittaci* Frauenfeld, *broscus* Jordan et Rothschild, *cypha* Jordan, *gemina* Jordan, *stomis* Jordan.

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